

Fig. 1

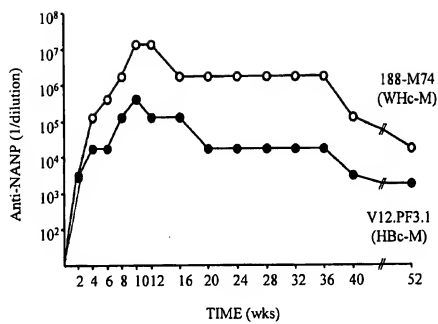


Fig. 2

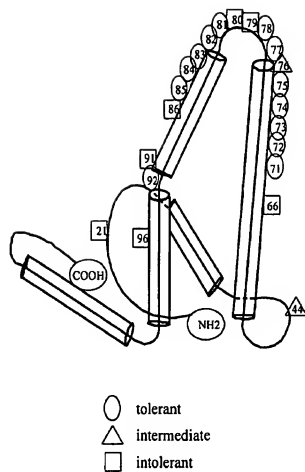


Fig. 3



Fig. 4

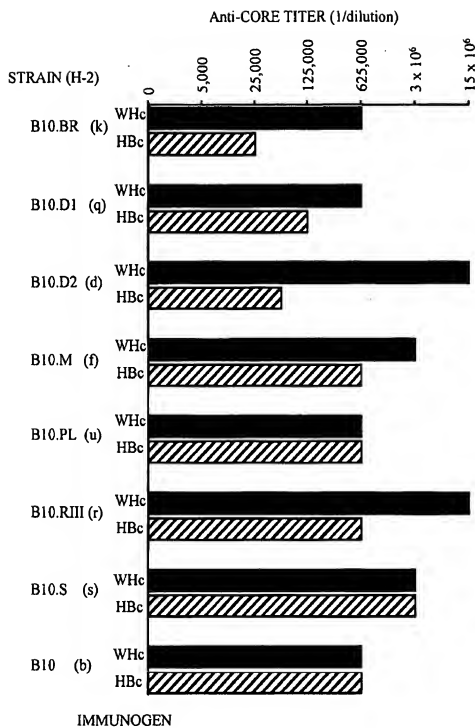


Fig. 5

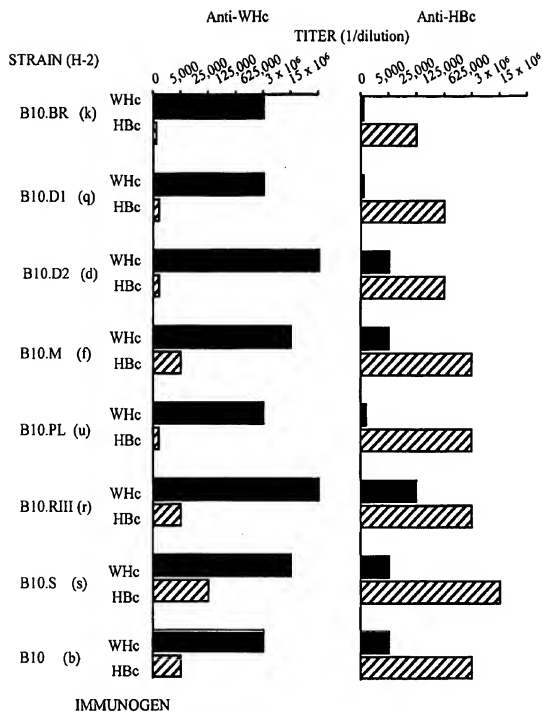


Fig. 6

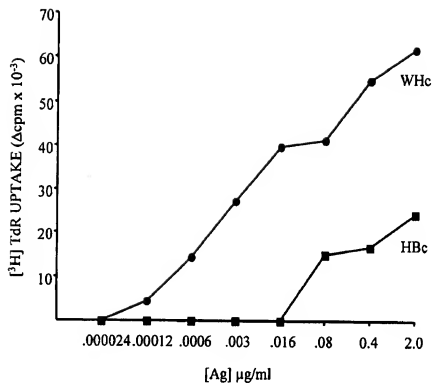


Fig. 7

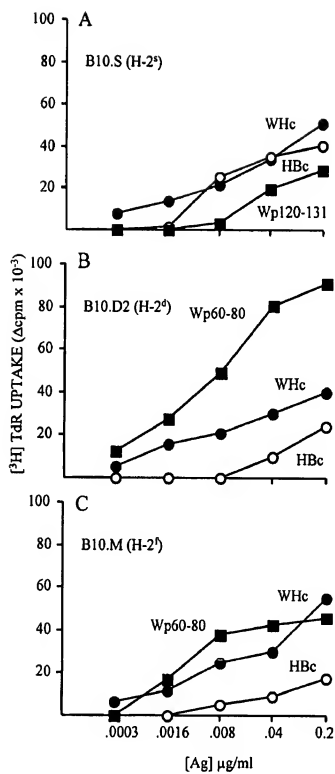


Fig. 8

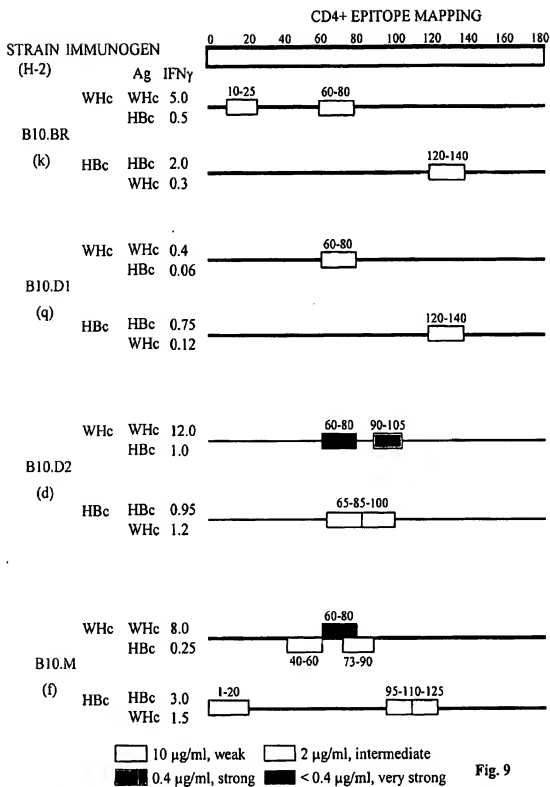


Fig. 9

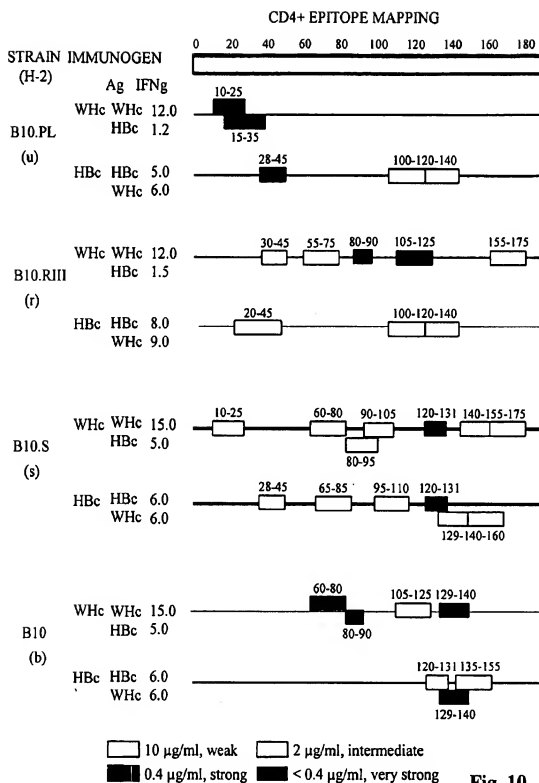


Fig. 10

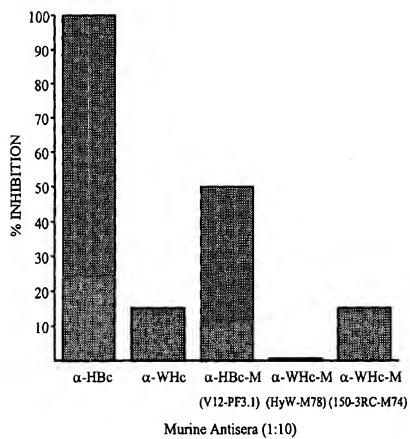


Fig. 11

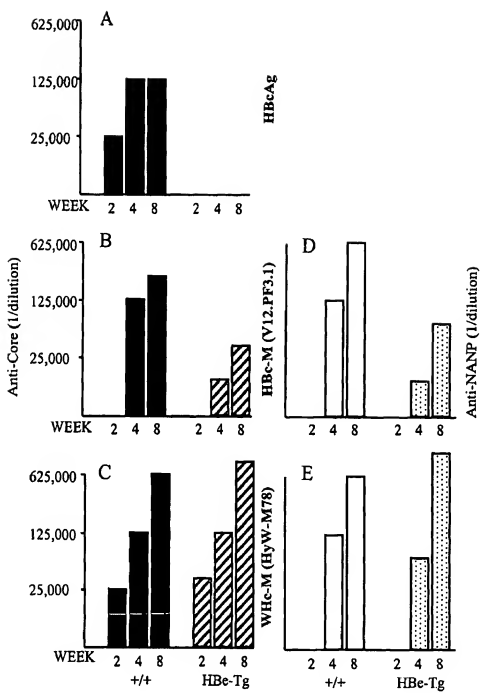


Fig. 12

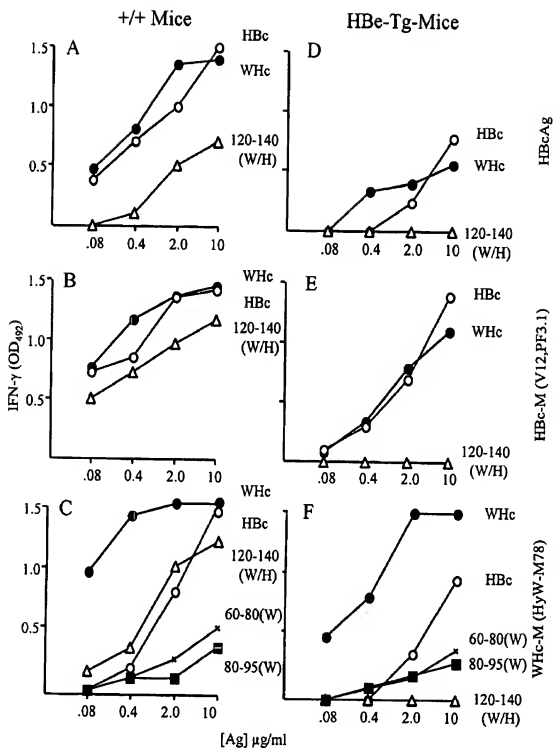


Fig. 13

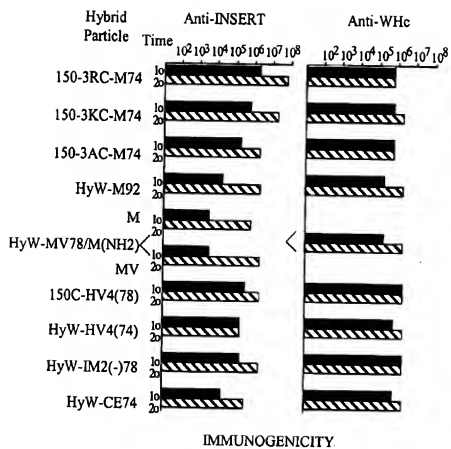


Fig. 15

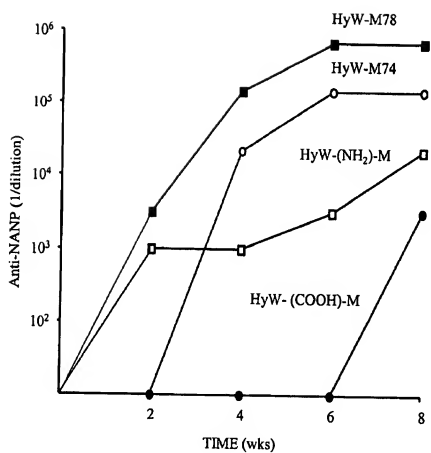


Fig. 16

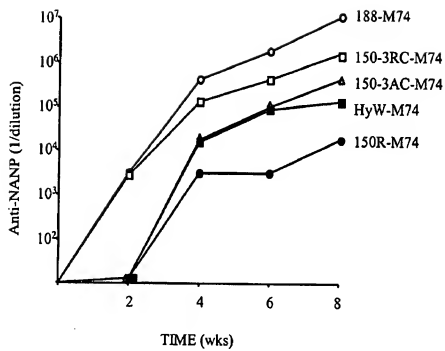


Fig. 17

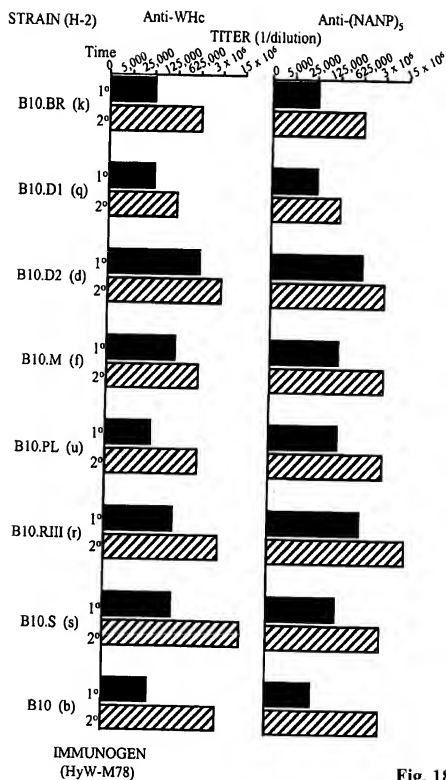


Fig. 18

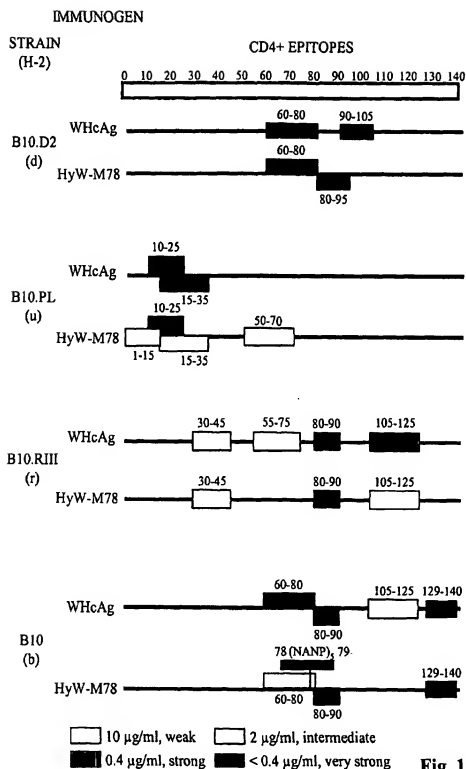


Fig. 19

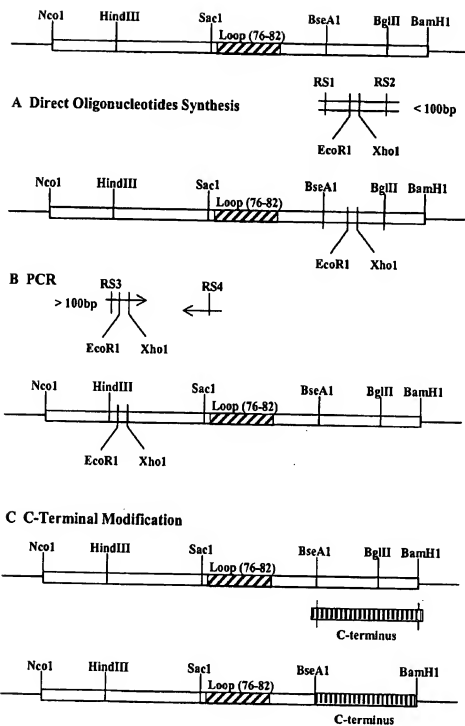


Fig. 20

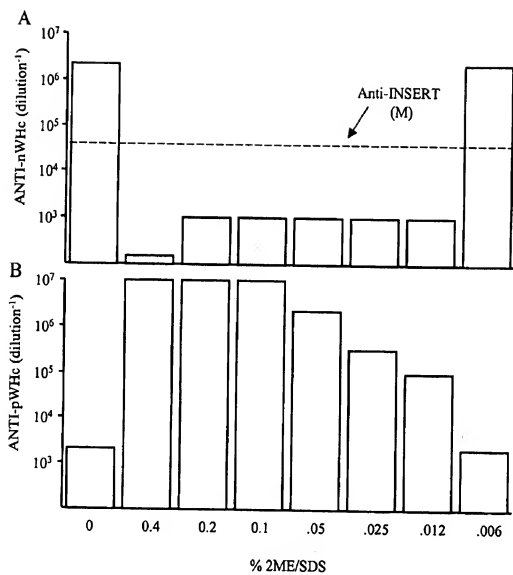


Fig. 21

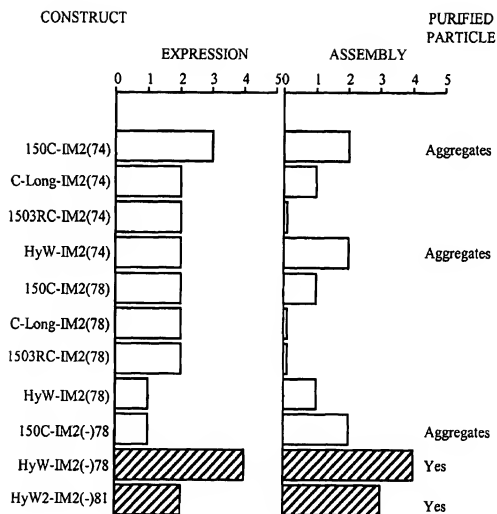


Fig. 22

| | | | | | | | | | | | | | | | | | | | | | | | | | Polyclonal | | | |
|----------------------|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|--|-------------------|--------|---------------------|
| | | | | | | | | | | | | | | | | | | | | | | | | | mAb I4C2 | Anti-HyW-IM2(-)78 | | |
| Wt | M2e | M | S | L | L | T | E | V | E | T | P | I | R | N | E | W | G | C | R | C | N | D | S | S | D | | | |
| P1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 51200 | 625000 |
| P2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 25600 | 125000 |
| P3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 12800 | 125000 |
| P4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 25600 | 3 x 10 ⁶ |
| P5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6400 | 625000 |
| P6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1600 | 625000 |
| P7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 12800 | 3 x 10 ⁶ |
| P8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 25600 | 625000 |
| P9 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 102400 | 3 x 10 ⁶ |
| Core-IM2(-) Particle | | | | | | | | | | | | | | | | | | | | | | | | HyW-IM2(-)78 | 625000 | 15 x 10 | | |
| Core-M78 Particle | | | | | | | | | | | | | | | | | | | | | | | | | 0 | - | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | (Dilution=0.5 OD ₄₉₂) (1/Dilution) | | | |

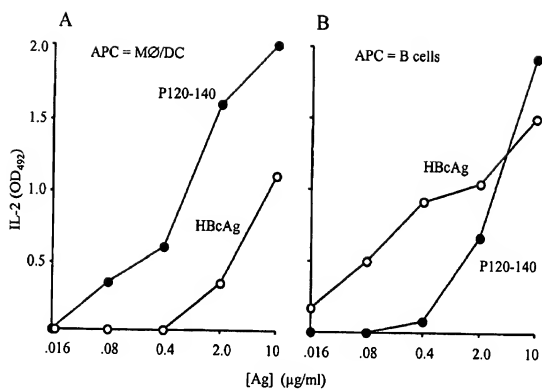


Fig. 24

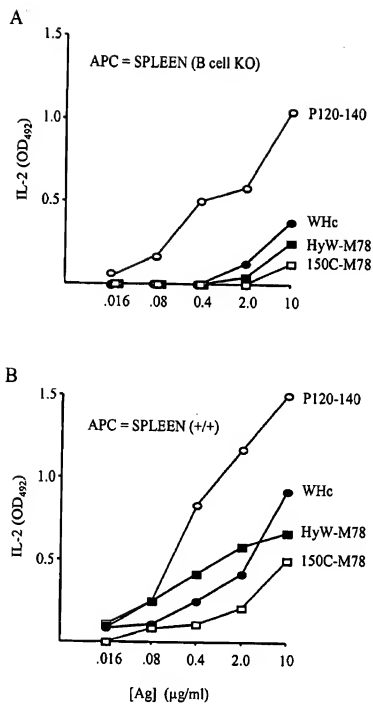


Fig. 25

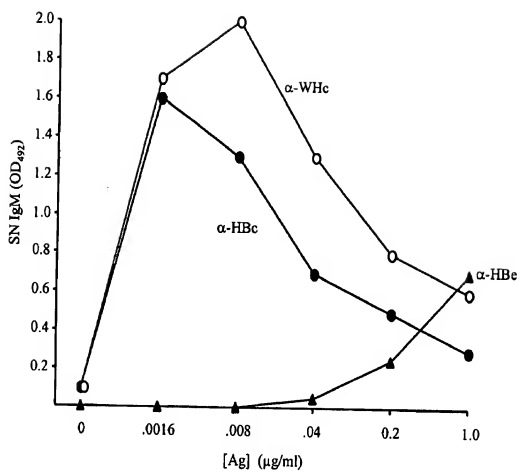


Fig. 26

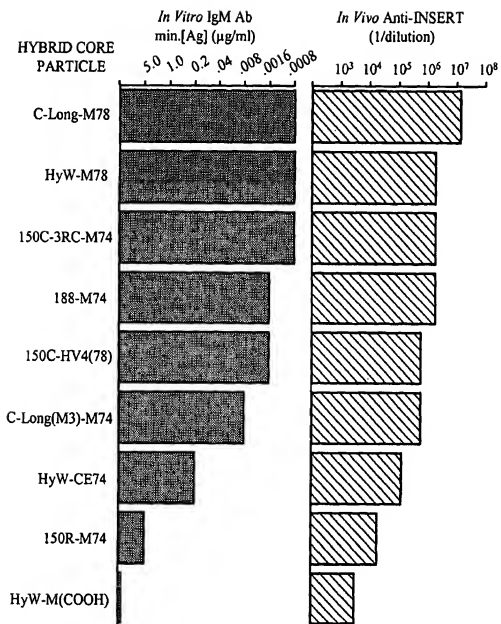


Fig. 27

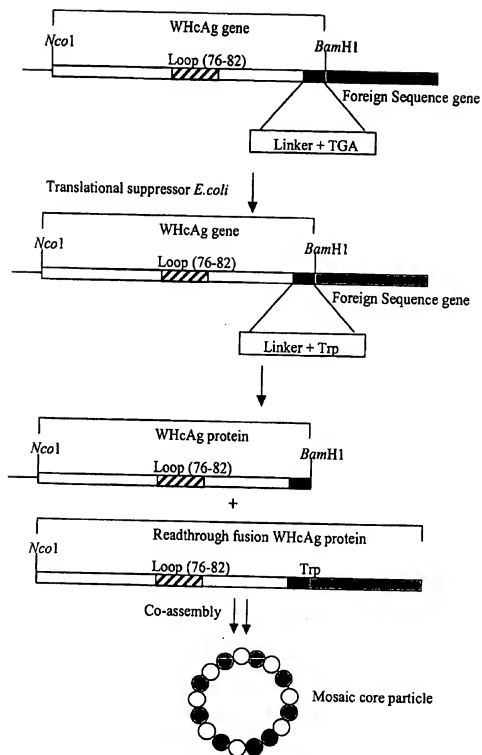


Fig. 28

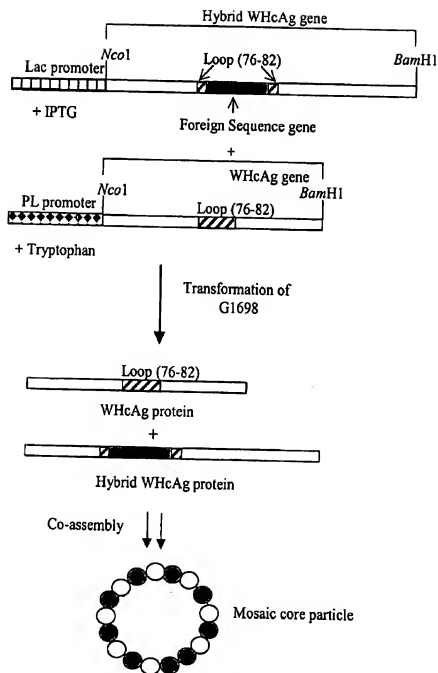


Fig. 29

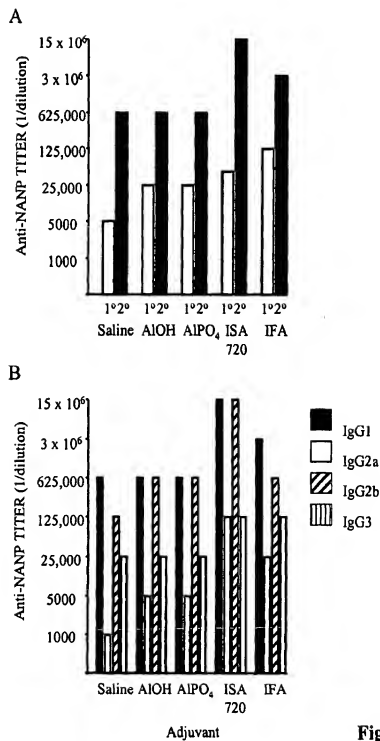


Fig. 30

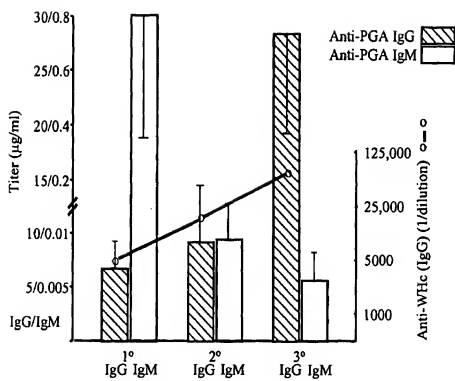


Fig. 31

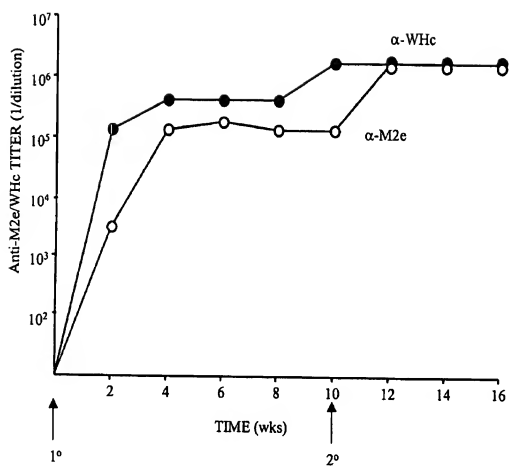


Fig. 32

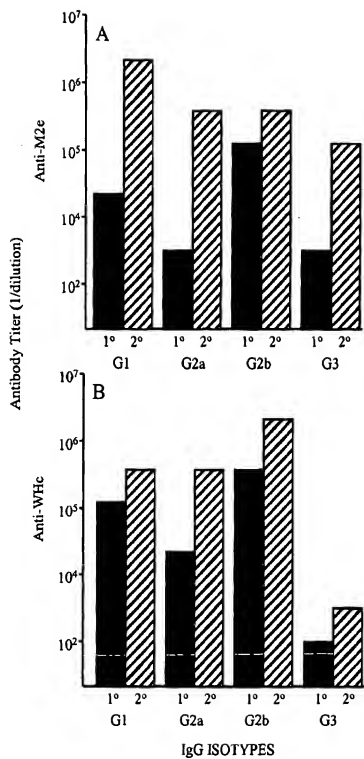


Fig. 33

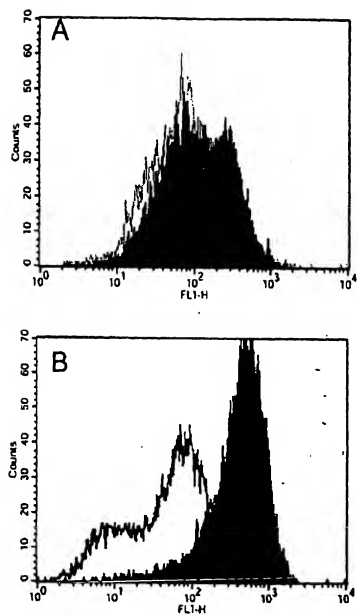


Fig. 34

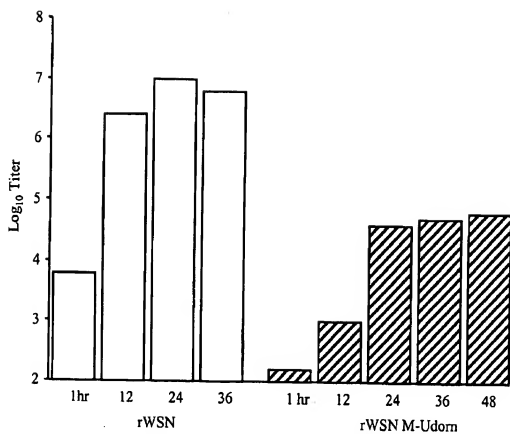


Fig. 35

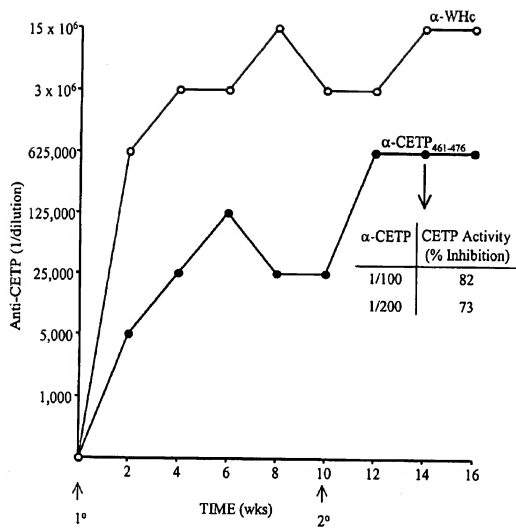


Fig. 36

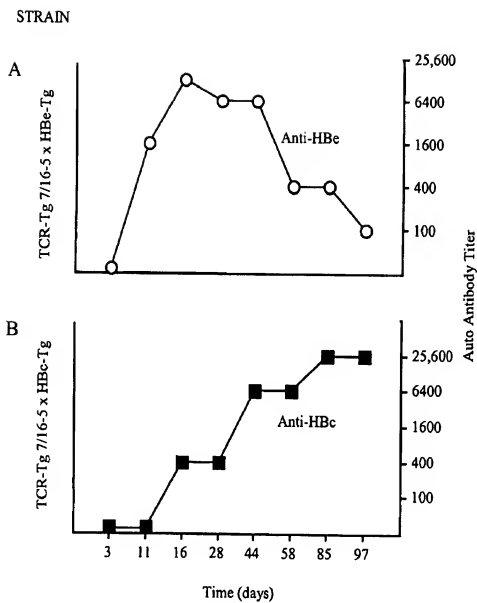


Fig. 37

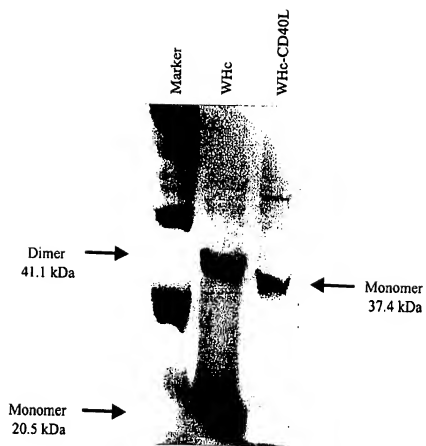


Fig. 38

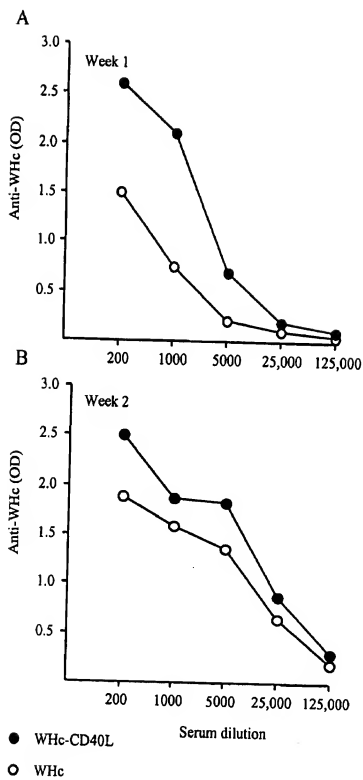


Fig. 39

Fig. 40

A Wild Type WHcAg DNA (SEQ ID NO:37)

ATGGACATAGATCCCTATAAAGAATTGGTTCATCTTATCAGTTGTTGAATTTCTTCC
TTTGGACTTCTTTCCCTGACCTTAATGCTTTGGTGGACACTGCTACTGCCTTGTATGAAG
AAGAGCTAACAGGTAGGGAAACATTGCTCTCCGCACCATACAGCTATTAGACAAGCTTTA
GTATGCTGGGATGAATTAACTAAATTGATAGCTTGGATGAGCTCTAACATAACTTCTGA
ACAAGTAAGAAACAATCATTGTAAATCATGTCAATGATACCTGGGGACTTAAGGTGAGAC
AAAGTTTATGGTTTCATTTGTCAATGTCTCACTTTCGGACAACATACAGTTCAAGAATT
TTAGTAAGTTTTGGAGTATGGATCAGGACTCCAGCTCCATATAGACCTCCTAATGCACC
CATTCCTCGACTCTTCCGGAACATACAGTCAATTAGGAGAAGAGGAGGTGCAAGAGCTT
CTAGGTCCCCCAGAAGACGCACTCCCTCTCCTCGCAGGAGAAGATCTCAATCACCGCGT
CGCAGACGCTCTCAATCTCCATCTGCCAACTGCTGA

B Wild Type WHcAg (SEQ ID NO:1)

MDIDPYKEFGSSSYQLLNFLPLDFFPDNLALVDTATALYEEELTGREHCSPHHTAIRQAL
VCWDELTKLIAMSSNITSEQVRTIIIVNHVNDTWGLKVRQSLWFHLSCLTFGQHTVQEF
LVSPGVWIRTPAPYRPPNAPILSTLPEHTVIRRRGGARASRSPRRRTSPRRRRSQSPR
RRRSQSPSANC

C Truncated WHcAg (SEQ ID NO:38)

MDIDPYKEFGSSSYQLLNFLPLDFFPDNLALVDTATALYEEELTGREHCSPHHTAIRQAL
VCWDELTKLIAMSSNITSEQVRTIIIVNHVNDTWGLKVRQSLWFHLSCLTFGQHTVQEF
LVSPGVWIRTPAPYRPPNAPILSTLPEHTVI

Fig. 41

A Wild Type GSHcAg DNA (SEQ ID NO:39)

ATGGACATAGATCCCTATAAAGAATTGGTTCCTTATCAGTTGTTGAATTTCTTCC
TTTGGACTTTTTCTCGATCTCAATGCATTGGTGGACACTGCTGCTGCTCTTTATGAAG
AAGAATTAAACAGGTAGGGAGCATTGTTCTCCTCATCATACTGCTATTAGACAGGCCTTA
GTGTGTTGGGAAGAATTAACTAGATTAATTACATGGATGAGTGAAAAACACAGAAGA
AGTTAGAAGAATTATTGTGATCATGTCAATAACTTGGGGACTTAAAGTAAGACAGA
CTTTATGGTTTCATTATCATGTCCTTACTTTTGGACAACACACAGTTCAGAAATTTTG
GTTAGTTTTGGAGTATGGATTAGAACTCCAGCTCCTTATAGACCACCTAATGCACCCAT
TTTATCAACTCTCCGGAACATACAGTCATTAGGAGAAGAGGAGGTTCAGAGCTGCTA
GGTCCCCCGAAGACGCACTCCCTCTCCTCGCAGGAGAAGGTCTCAATCACCGCGTGC
AGACGCTCTCAATCTCCAGCTTCCAACCTGCTGA

B Wild Type GSHcAg (SEQ ID NO:21)

MDIDPYKEFGSSYQLLNFLPLDFFPDLNALVDTAALYEEELTGREHCSPHHTAIRQAL
VCWEELTRLITWMSENTTEEVRRIIVDHVNTWGLKVRQTLWFHLSCLTFGQHTVQEF
VSPGVWIRTPAPYRPPNAPILSTLPEHTVIRRRGGSRAARSPRRRTPSPRRRRSQSPRR
RRSQSPASNC

C Truncated GSHcAg (SEQ ID NO:40)

MDIDPYKEFGSSYQLLNFLPLDFFPDLNALVDTAALYEEELTGREHCSPHHTAIRQAL
VCWEELTRLITWMSENTTEEVRRIIVDHVNTWGLKVRQTLWFHLSCLTFGQHTVQEF
VSPGVWIRTPAPYRPPNAPILSTLPEHTVI

Fig. 42

A Wild Type HBcAg DNA (SEQ ID NO:57)

ATGGACATCGACCCCTTATAAGAATTGGAGCTACTGTGGAGTTACTCTCGTTTTTGCC
TTCTGACTTCCTTCCTTCAGTACGAGATCTTCTAGATACCGCCTCAGCTCTGTATCGGG
AAGCCTTAGAGTCTCCTGAGCATTGTTCACCTCACCATACTGCACCTCAGGCAAGCAATT
CTTTGCTGGGGGGAACATAAGTACTAGCTACCTGGGTGGGTGTTAATTTGGAAGATCC
AGCATCCAGAGACCTAGTAGTCAGTTATGTCAACACTAATATGGGCCTAAAGTTCAGGC
AACTCTTGTTGTTTACATTTCTTGTTCTCACTTTTGGGAAGAGAAACCGTTATAGAGTAT
TTGGTGTCTTTCGGAGTGTGGATTGCACTCCTCCAGCTTATAGACCACCAAAATGCCCC
TATCCTATCAACACTTCCGAAACTACTGTTGTTAGACGACGAGGCAGTCCCCTAGAA
GAAGAACTCCCTCGCCTCGCAGACGAAGGTCTCAATCGCCGCTCGCAGAAGATCTCAA
TCTCGGAATCTCAATGTGA

B Wild Type HBcAg (SEQ ID NO:41)

MDIDPYKEFGATVELLSFLPSDFFPSVRDLDLTASALYREALSPHCSPHHTALRQAI
LCWGELMTLATWVGVNLEDPASRD LVSYVNTNMGLKFRQLLWFHISCLTFGRETVIEY
LVSFVGWIRTPPAYRPPNAPILSTLPETTVRRRGRSPRRRTPSRRRRSQSPRRRRSQ
SRESQC

C Truncated HBcAg (SEQ ID NO:58)

MDIDPYKEFGATVELLSFLPSDFFPSVRDLDLTASALYREALSPHCSPHHTALRQAI
LCWGELMTLATWVGVNLEDPASRD LVSYVNTNMGLKFRQLLWFHISCLTFGRETVIEY
LVSFVGWIRTPPAYRPPNAPILSTLPETTV